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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,225

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Masahiko Nakajima

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EXAMINER

LONEY, DONALD J

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,225	Applicant(s) NAKAJIMA ET AL.	
	Examiner Donald Loney	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009 and 12 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 7 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/13/09,06/24/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 12, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-326430 cited by the applicant and cited in the international search report.

JP 430 discloses a hollow plate structure wherein two dimpled panels, comprising truncated cone shaped protrusions, facing one another and attached at the end faces of the protrusions (i.e. truncated cones) as recited. See figures 2-4. JP '430 does fail to specifically disclose the ratio of 0.3-0.58 and the 50-70 degree angle of the side surface of the cones. It is silent as thereto.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to JP '430 to form the truncated cones of what ever size and/or spacing is required for a particular application and since this would merely involve a change in shape and/or size which is generally within ordinary skill in the art and since JP '430 discloses truncated cone shape protrusions, which angled side walls. See MPEP 2144.04IV. This change in shape and or size is what would govern the ratio as recited.

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6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of Clark (6004652), Shorten et al (6029962) or Sell et al (6385864).

All of Clark, Shorten et al and Sell et al disclose a panel wherein two dimpled panels are fused to one another with the dimples facing against one another. The dimples are truncated cone shaped and the ends of the protrusions face one another. See figures 13a and 13b along with column 8, lines 23-44. The dimpled protrusions appear truncated cone in shape. Clark does fail to specifically disclose the ratio of the area of the openings (i.e. lower base) to the circumferential surface area (i.e. area of the flat face of the sheet) along with the rising angle of the cone face being 50-70 degrees. Clark is silent as thereto. However, Clark does disclose the dimples can have varying sizes, geometries, heights, profiles, dimensions, spacings, densities and or arrangements in order to provide the panel with what ever properties are required for a particular application. See column 4, lines 4-7 and 51-53. See figures 2, 3, 4 and specifically 118 in figure 8 in Shorten et al. Shorten et al also fails to specifically disclose the ratio of the area of the openings (i.e. lower base) to the circumferential surface area (i.e. area of the flat face of the sheet) along with the rising angle of the cone face being 50-70 degrees. Shorten et al does disclose the indentations can be of a variety of shapes, and sizes as needed in order to provide the desired degree of flexibility and cushioning to the member (see column 2, lines 51-54). See figures 10, 12, 14, 16 and 18 in Sell et al. Sell et al also specifically disclose the ratio of the area of the openings (i.e. lower base) to the circumferential surface area (i.e. area of the flat face of the sheet) along with the rising angle of the cone face being 50-70 degrees. Sells et al does

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disclose the indentations can be of different shapes as needed for a particular application (see column 6, lines 23-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to any of the primary references to form dimples meeting the ratio and/or face angle motivated by the all the references discloses the dimples can be of varying sizes, geometries, heights, profiles, dimensions, spacings, densities and or arrangements in order to provide the panel with what ever properties are required for a particular application and since this would merely involve a change in shape and/or size which is generally within ordinary skill in the art. See MPEP 2144.04IV. This change in shape and or size is what would govern the ratio as recited.

Response to Arguments

7. Applicant's arguments filed February 13, 2009 have been fully considered but they are not persuasive. The applicant argues that the recited invention would not be obvious over JP'430 since the examples in the instant specification show that a plate with the recited features has good bending characteristics. It is noted that there are no bending characteristics recited in the claim and this is not a direct comparison with the prior art applied. The applicant argues that the instant claim 1 is unobvious over any of Clark, Shorten or Sell because of the bending characteristics referred to above, however, there are no bending characteristics recited in the claim and this is not a direct comparison with the prior art applied. The applicant also argues the change in size and/or shape would not be obvious, however, as indicted by reference to the MPEP a change in size and/or shape is within ordinary skill in the art. Additionally, one would be

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motivated to change the size and/or shape since all of Clark, Shorten and Sells disclose that the dimples can have varying sizes, geometries, heights, profiles, dimensions, spacings, densities and or arrangements in order to provide the panel with what ever properties are required for a particular application.

Allowable Subject Matter

8. Claims 5 and 7 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach or fairly suggest the method and apparatus comprising using a pair of sheet induction plates, a pressure reduced chamber, a heater disposed between the pair of sheet induction plates wherein the pair of sheet induction plates are inclined in a direction toward the point of contact between the sheets in combination with all the other limitations in claims 5 and 7. The examiner is relying on the applicant's arguments filed February 13, 2009.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-1493. The examiner can normally be reached on Mon, Tues, Thurs and Fri. 8AM-4PM, flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald J. Loney/
Primary Examiner
Art Unit 1794

DJL;D.Loney
07/20/09